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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,645	10/18/2000	Rudolf Maurer	15258-049600US	4394

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EXAMINER

SORKIN, DAVID L

ART UNIT	PAPER NUMBER
1723	9

DATE MAILED: 12/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/691,645	MAURER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	David L. Sorkin	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 October 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-19 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 October 2002 has been entered.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11-19 are rejected under 35 U.S.C. 112, first and second paragraphs, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention and, to the extent understood, not being directed to subject matter described in the original specification.

5. The claims are confusing as to what portions of the disclosed structure are the joint surfaces. Applicant has stated on the record in paper No. 8 that "the projections ... do not form joint locations". However, claim 11 states "the other continuous joint

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surface including a projection". If the projections and cut-outs do not form the joint locations, why do the claims recite "one joint surface including a cut-out" and "the other continuous joint surface including a projection". The specification states in paragraph [05], "joint locations ... form surfaces which stand transversely to the central axis". Oppositely, claim 11 now recites "the continuous joint surface including the cut-out providing an upwardly extending sealing surface". This recitation is also contradicted by the statement in paper No. 8, "The other continuous joint surface includes a protrusion from extending into (but not sealing) the cutouts".

6. Also, regarding section 112, second paragraph, in claim 11, there is lack of antecedent basis for "the other continuous surface".

7. Also, regarding section 112, second paragraph, it is now unclear whether an assembled mixer or disassembled mixer is being claimed. While claim 11 still recites "intermediate elements abutting the circumferential reinforcement region", "protrusions extending into the cut-outs positioning the reinforcement region", has been changed to "protrusions for extending into the cut-outs for positioning the reinforcement region".

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2)(a) of such treaty in the English language.

9. While it is quite unclear what is being claimed as discussed above, the examiner has attempted to consider the claims with regard to the prior art, to the extent possible.

10. Claims 11-13 and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Streiff (US 6,394,644). Regarding claim 11, Streiff ('644) discloses a static mixer comprising mixer elements (10a, 10c) arranged along a central axis, each having a circumferential reinforcement region (12); intermediate elements (10b, 10d), abutting the circumferential reinforcement region and forming in combination with the mixer elements a static mixer body of a preselected length with a periphery defined by the reinforcement region and the intermediate elements; and joints between the reinforcement region and the intermediate elements defining continuous joint surfaces and a seal formed between the continuous joint surfaces between the reinforcement regions and the intermediate elements (see Fig. 5); one continuous joint surface including a cut-out (80,81) and another continuous joint surface including a protrusion (82,83) for extending into the cut-outs for positioning the reinforcement region and the intermediate elements with respect to each other, the continuous joint surface including the cut-out providing an upwardly extending sealing surface. Regarding the functional recitation "to enable machining access for adjusting the length of the static mixer", one could disassemble the mixer and machine as one desires. Applicant is reminded that "apparatus claims cover what a device *is*, not what a device *does*" *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 1525, 1528 (Fed. Cir. 1990) (emphasis in original). See also MPEP 2113, which explains that "the patentability of a product does not

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depend upon its method of production". Regarding claim 12, the reinforcement regions are ring-shaped; cut-outs (80,81) are present in the reinforcement region; and a projecting part (82,83) protrudes from at least one of the continuous joint locations of at least one intermediate element, the projecting shape having a shape complementary to a shape of the cut-outs. Regarding claim 13, at least some of the projecting parts are separate parts fitted into cut-outs in the intermediate elements (see Figs. 6A-6C).

Regarding claim 15, the mixer elements each comprise a gridwork of webs (32) which are arranged in layers oriented parallel to the central axis with the webs of adjacent layers crossing one another. Regarding claim 16, the webs of adjacent layers cross

one another and enclose angles between 10 and 70 degrees (see col. 2, lines 63-66).

Regarding claim 17, the elements are plastic (see col. 6, line 38). Regarding claim 18, the gridwork of webs is co-cast with the reinforcement regions (see col. 1, lines 62-65).

11. Claims 11-13, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by King (US 4,614,440). Regarding claim 11, King ('440) discloses a static mixer comprising mixer elements (10, 12, etc.) arranged along a central axis, each having a circumferential reinforcement region (see Fig. 4); intermediate elements (11, etc.), abutting the circumferential reinforcement region and forming in combination with the mixer elements a static mixer body of a preselected length with a periphery defined by the reinforcement region and the intermediate elements; and joints between the reinforcement region and the intermediate elements defining continuous joint surfaces and a seal formed between the continuous joint surfaces between the reinforcement regions and the intermediate elements (see Figs. 3 and 4); one continuous joint surface

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including a cut-out (see Figs. 3 and 4) and another continuous joint surface including a protrusion (see Figs. 3 and 4) for extending into the cut-outs for positioning the reinforcement region and the intermediate elements with respect to each other, the continuous joint surface including the cut-out providing an upwardly extending sealing surface. Regarding the functional recitation "to enable machining access for adjusting the length of the static mixer", one could disassemble the mixer and machine as one desires. Applicant is reminded that "apparatus claims cover what a device *is*, not what a device *does*" *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Regarding claim 12, the reinforcement regions are ring-shaped; cut-outs are present in the reinforcement region; and a projecting part protrudes from at least one of the continuous joint locations of at least one intermediate element, the projecting shape having a shape complementary to a shape of the cut-outs (see Figs. 3 and 4). Regarding claim 13, at least some of the projecting parts are separate parts fitted into cut-outs in the intermediate elements (see Figs. 3 and 4). Regarding claim 15, the mixer elements each comprise a gridwork of webs (13) which are arranged in layers oriented parallel to the central axis with the webs of adjacent layers crossing one another (see Fig. 3 and col. 3 lines 32-37 of King US 3,923,288 which is incorporated by reference). Regarding claim 16, the webs of adjacent layers cross one another and enclose angles between 10 and 70 degrees (see Fig. 3 and col. 3 lines 32-37 of King US 3,923,288 which is incorporated by reference). Regarding claim 18, apparatus claims are not limited by steps of making. See MPEP 2113.



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12. Claims 11-13, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Bokenkroger (US 1,857,348). Regarding claim 11, Bokenkroger ('348) discloses a static mixer comprising mixer elements (9) arranged along a central axis, each having a circumferential reinforcement region (11<sup>a</sup>, 12<sup>a</sup>); intermediate elements (others of 9), abutting the circumferential reinforcement region and forming in combination with the mixer elements a static mixer body of a preselected length with a periphery defined by the reinforcement region and the intermediate elements; and joints between the reinforcement region and the intermediate elements defining continuous joint surfaces and a seal formed between the continuous joint surfaces between the reinforcement regions and the intermediate elements (see page 1, lines 73-99); one continuous joint surface including a cut-out portion (12<sup>a</sup>) and another continuous joint surface including a protrusion (11<sup>a</sup>) for extending into the cut-outs for positioning the reinforcement region and the intermediate elements with respect to each other. Regarding the functional recitation "to enable machining access for adjusting the length of the static mixer", one could disassemble the mixer and machine as one desires. Applicant is reminded that "apparatus claims cover what a device *is*, not what a device *does*" *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 15 USPQ 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Regarding claim 12, the reinforcement regions are ring-shaped (see Fig. 3; cut-outs (12<sup>a</sup>) are present in the reinforcement region; and a projecting part (11<sup>a</sup>) protrudes from at least one of the continuous joint locations of at least one intermediate element, the projecting shape having a shape complementary to a shape of the cut-outs. Regarding claim 13, at least some of the projecting parts are



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separate parts fitted into cut-outs in the intermediate elements (see Figs. 3-5).

Regarding claim 17, the elements are ceramic (see page 1, line 55-59). Regarding claim 19, first cut-outs are configured on one side of the reinforcement regions; and second cut-outs are configured on the other side of the reinforcement regions and displaced 90 degrees from the first cut-outs (see Figs. 3-5, page 1, lines 73-99).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Streiff (US 6,394,644) in view of Takeda et al. (US 4,892,379). In the mixer of Streiff ('644) discussed above with regard to claim 11 further includes cylinder (62) holding the mixer elements at the reinforcement region and the intermediate element together. However, it is not explicitly stated the cylinder is longitudinally slit and elastic sheet metal. Takeda ('379) teaches a longitudinally slit cylinder (5) of resiliently elastic sheet metal lamina. It is considered that it would have been obvious to one of ordinary skill in the art to have made the cylinder of Streiff ('644) be a longitudinally slit cylinder of resiliently elastic sheet metal lamina as taught by Takeda ('379) to provide the benefit of spring force to hold elements therein (see col. 3, lines 7-8).

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Streiff (US 6,394,644). Streiff ('644) further discloses cut-outs on opposite sides are the

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reinforcement region being displaced 90 degrees from each other. However, a plurality on each side is not disclosed. It is considered that it would have been obvious to one of ordinary skill in the art to have varied duplicated the cut-outs. See *St. Regis Paper Co. v. Bemis Co., Inc.* 193 USPQ 8, 11 (CCPA 1977) and *In re Harza* 124 USPQ 379 (CCPA 1960) regarding the obviousness of duplicating parts.

16. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over King (US 4,614,440) in view of Takeda et al. (US 4,892,379). In the mixer of King ('440) discussed above with regard to claim 11 a longitudinally slit cylinder is not disclosed. Takeda ('379) teaches a longitudinally slit cylinder (5) of resiliently elastic sheet metal lamina. It is considered that it would have been obvious to one of ordinary skill in the art to have held the elements of King ('440) in a longitudinally slit cylinder of resiliently elastic sheet metal lamina as taught by Takeda ('379) to provide the benefit of spring force to hold elements therein (see col. 3, lines 7-8).

17. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over King (US 4,614,440). It is considered that it would have been obvious to one of ordinary skill in the art to have made the elements of well known materials such as plastic or metal to suit a particular material being mixed.

18. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over King (US 4,614,440). The mixer of King ('440) discussed above with regard to claim 12, has first cut-outs configured on one side of the reinforcement regions and a second cut-outs configured on the other side. However, the cut-outs are not disclosed to be displaced by 90 degrees. Bokenkroger ('348) discloses a displacement of cut-outs on opposite

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side of 90 degrees (see page 1, lines 73-99). It is considered that it would have been obvious to one of ordinary skill in the art to have displaced the cut-outs by 90 degree because Bokenkroger ('348) teaches this results in easily assembly of elements (see page 1, lines 73-99).

19. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bokenkroger (US 1,857,348) in view of Takeda et al. (US 4,892,379). In the mixer of Bokenkroger ('348) discussed above with regard to claim 11 further includes cylinder (7) holding the mixer elements at the reinforcement region and the intermediate element together. However, it is not explicitly stated the cylinder is longitudinally slit and elastic sheet metal. Takeda ('379) teaches a longitudinally slit cylinder (5) of resiliently elastic sheet metal lamina. It is considered that it would have been obvious to one of ordinary skill in the art to have made the cylinder of Bokenkroger ('348) be a longitudinally slit cylinder of resiliently elastic sheet metal lamina as taught by Takeda ('379) to provide the benefit of spring force to hold elements therein (see col. 3, lines 7-8).

### ***Response to Arguments***

20. Applicant has declined to discuss the previous rejection of claims 11-13, 15, 16 and 18 under section 102(b) as being anticipated by King (US 4,614,440).

21. Applicant has declined to discuss the previous rejection of claims 11-13, 17 and 19 under section 102(b) as being anticipated by Bokenkroger (US 1,857,348).

22. Applicant has declined to discuss Takeda et al. (US 4,892,379), which was relied upon in the previous office action.

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23. Applicant discusses an intended process of making the claimed mixer and how it would be more difficult to make the mixer of Streiff (US 6,394,644); however, applicant has failed to establish a structural difference between the invention as claimed and that disclosed by Streiff (US 6,394,644).

24. Applicant states, regarding Streiff ('664), that protrusions and cut-outs interrupt the surfaces. However, according to the instant claims, protrusions and cut-outs are required element of the continuous joint surfaces.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 8:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

November 25, 2002

  
**TONY G. SOOHOO**  
**PRIMARY EXAMINER**